

# ENGINEERING CHANGE NOTICE

## DART AEROSPACE LTD

Date:	16.01.05	Job No.:	ADR Yes/No:	N	ADR Date:		ECN #:	16- 501
Product No.:	Apical 350-61 CCK	Created By:	KJ	Approved By:	MP			
Product Name:	Cable Cutters	Checked By:	ASS					

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)	Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
Director of Operations	N			DQA / QA Coord.	Y	PS / ED	
Production Manager / Coord.	Y	MP / MF		QC Coordinator	Y	PD	
Purchasing Manager / Purchasing Coord.	N	LL / CL		Customer Support	Y	SW / LM	
Production Engineering Coord.	Y	DD / JLM		Customer Technical Support	Y	MB / HS	
Production Engineering Coord.	N	DL		Marketing	Y	SL / WR	
Customer Order Processing	N	SL / BG		Sales Support Manager	Y	CP	

Reason for Change:  
Incorporated ECN05098

Documents Affected:  
Release 646.4000 Rev C, I1350-61 Rev H

See ECN 16-503

50124254 - AIRBUS  
50124397  
HILLSBORO

need shims will ship at a later date

IF APPLICABLE: NCR: \_\_\_\_\_ PAR: \_\_\_\_\_ CAR: \_\_\_\_\_ CIR: \_\_\_\_\_ URF: \_\_\_\_\_

PAPERWORK UPDATE ☐ PARTS MUST COMPLY ☒ PREVIOUS PARTS SATISFACTORY ☐

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3	Notify Augusta Westland	N			
4	Manufacturing Licensing Agreement Update	N			

#	Engineering Actions	Reqd	Resp	Notes	Complete
5	Required Documents/Drawings/Item ID's Under Review (URF)	N			
6	Update Master Document List (MDL)	N			
7	Update Document Record (DR)	N			
8	Update Product Compatability Matrix	N			
9	Notify TC / FAA of Change (eg. ICA, 8110-3)	N			
10					

#	Document Control Actions	Reqd	Resp	Notes	Complete
11	Move / Update Electronic Files / Design Journal	N			
12	Update Product Specification Files (Bluefiles)	Y	KJ		
13	Update Approved/Preliminary Dwg PDF Files	Y	KJ		
14	Update Product Development Summary (STC applications)	N			
15	Update QSI 021 (TC/FAA STC) and/or STC Approval List	N			
16	Create/Update Parts / STC Database	N			
17	Update / Verify Airworthiness Release Certificate Database	N			
18	Create / Update Change Record Form / Item Card Database	N			
19	Create / Update Packaging Process Plan (PPP)	N			
20	Red Decals required on Packaging Process Plan (PPP)?	N			
21	Update Controlled Supplier Documents (Qpulse) Database	N			
22	Update Grey Project Binder / Electronic Project Folder	Y	KJ		
23	Update D-Part / M-Drawing / DSI / DEO Master Binders	N			
24	Update "Royalty Paid to" attribute (Parts sold under Dart USA STC's)	N			
25					

Description / Action:

Please update BOM and Route

646.4003 - 0 STK, 0 wip  
646.4004 - 0 STK, 0 wip.  
646.4002 - 2 STK - stay as is. UMF  
646.4001 - see attached

16-1-13

ECN Verified & Complete: \_\_\_\_\_ Date: \_\_\_\_\_

# ENGINEERING CHANGE NOTICE

## DART AEROSPACE LTD

Date: 16.01.07	Job No.:	ADR Yes/No: N	ADR Date:	ECN #: 16- 503
Product No.: Apical 350-61 CCK		Created By: KJ	Approved By: <i>[Signature]</i>	
Product Name: Cable Cutters		Checked By: <i>[Signature]</i>		

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
Director of Operations	N		
Production Manager / Coord.	Y	MP / MF	
Purchasing Manager / Purchasing Coord.	Y	LL / CL	
Production Engineering Coord.	Y	DD / JLM	
Production Engineering Coord.	N	DL	
Customer Order Processing	N	SL / BG	

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
DQA / QA Coord.	Y	PS / ED	
QC Coordinator	Y	PD	
Customer Support	N	SW / LM	
Customer Technical Support	Y	MB / HS	
Marketing	N	SL / WR	
Sales Support Manager	N	CP	

**Reason for Change:**  
 Shim (646.9410) and screws (601.3875) need to be added to 646.4001, 646.4003 & 646.4005 if OEM provisions are installed on aircraft

**Documents Affected:**  
 Release 646.9400 Rev NC

IF APPLICABLE:    NCR: \_\_\_\_\_    PAR: \_\_\_\_\_    CAR: \_\_\_\_\_    CIR: \_\_\_\_\_    URF: \_\_\_\_\_

PAPERWORK UPDATE ☐    PARTS MUST COMPLY ☒    PREVIOUS PARTS SATISFACTORY ☐

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
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6	Update Master Document List (MDL)	N			
7	Update Document Record (DR)	N			
8	Update Product Compatability Matrix	N			
9	Notify TC / FAA of Change (eg. ICA, 8110-3)	N			
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#	Document Control Actions	Reqd	Resp	Notes	Complete
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12	Update Product Specification Files (Bluefiles)	N			
13	Update Approved/Preliminary Dwg PDF Files	Y	KJ		
14	Update Product Development Summary (STC applications)	N			
15	Update QSI 021 (TC/FAA STC) and/or STC Approval List	N			
16	Create/Update Parts / STC Database	N			
17	Update / Verify Airworthiness Release Certificate Database	N			
18	Create / Update Change Record Form / Item Card Database	N			
19	Create / Update Packaging Process Plan (PPP)	N			
20	Red Decals required on Packaging Process Plan (PPP)?	N			
21	Update Controlled Supplier Documents (Qpulse) Database	N			
22	Update Grey Project Binder / Electronic Project Folder	N			
23	Update D-Part / M-Drawing / DSI / DEO Master Binders	N			
24	Update "Royalty Paid to" attribute (Parts sold under Dart USA STC's)	N			
25					

**Description / Action:**

Please update BOM and Route

See ECN 16-501

ECN Verified & Complete: \_\_\_\_\_ Date: \_\_\_\_\_

## Melanie Fauteux

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**From:** Marc Bellavance  
**Sent:** Thursday, January 14, 2016 9:38 AM  
**To:** Melanie Fauteux; Mario Poulin  
**Cc:** Carrie Pearson; William Monterroza; Shirley Hay; Alain Pelletier; Linda Lacelle; Sian Willems  
**Subject:** RE: 646.9410

Hi Mel/Mario,

I think that the best scenario here is as follows:

1. Sales Account Manager advise our customer that:
  - The kits are shipping as planned.
  - Shipment will be partial as shims are missing from the kits.
  - We intend to complete their kits by providing them with the shims in about 4-5 weeks, once we have them in stock.
  - If they are installing the kits within the next 3-4 weeks and do need the shims, DART Tech Support ON/CA can fully support them with the installation.
2. Ship the kits tomorrow as planned (unless the SAM gets back to us stating we can ship the kits at a later date).

Hope this helps.

Marc

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**From:** Melanie Fauteux  
**Sent:** January-14-16 9:01 AM  
**To:** Mario Poulin <mpoulin@dartaero.com>; Marc Bellavance <mbellavance@dartaero.com>  
**Cc:** Carrie Pearson <cpearson@dartaero.com>; William Monterroza <wmonterroza@dartaero.com>; Shirley Hay <shay@dartaero.com>; Alain Pelletier <apelletier@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>  
**Subject:** 646.9410

Hi,

It's a 4-5 week lead time for the shims. From the previous emails with Alain Madore and Steve, the quickest fix to not lose sales would be to ship without and put a note in sales to advise the customers...what are your thoughts? We have three shipping tomorrow

Thanks

Melanie

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment <input type="checkbox"/> Design <input type="checkbox"/> Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Pre <input type="checkbox"/> Material <input type="checkbox"/> Internal Transport <input type="checkbox"/> Tribal Knowledge <input type="checkbox"/> LOA <input type="checkbox"/> Substation <input type="checkbox"/> Past Expiry Date <input type="checkbox"/> Misidentified <input type="checkbox"/>	No Re-verification <input type="checkbox"/> Operator <input type="checkbox"/> Offset/Setup <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Use for Testing <input type="checkbox"/> Poor Information <input type="checkbox"/> Rushing <input type="checkbox"/> Product Improvement <input type="checkbox"/> Process Improvement <input type="checkbox"/> Manufacturing Process <input type="checkbox"/> Past Due <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Wave/Twist in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/> Set-up <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Drill Holes <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set <input type="checkbox"/> Misabeled <input type="checkbox"/> Fit/Function <input type="checkbox"/> Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Misread <input type="checkbox"/> Turning Sequence <input type="checkbox"/>
<input type="checkbox"/> OTHER : _____					

### Work In Process Value

*Thursday, January 14, 2016*

Page 1 of 1

Work Order ID	Start Date	Item ID	Customer ID	Start Qty	Matl Issue Date	Status Code	Lab Hrs	Lab Amt	Material Amt	Outplant Amt	Var Burd Amt	Fix Burd Amt	Matl Burd	Inventoried Costs	Wip Amt
139973 ✓	12/16/2015	646.4001		1.00	1/8/2016	Released	0.00	\$786.8592	\$941.6732	\$446.2982	\$0.0000	\$1,763.7754	\$0.0000	\$0.0000	\$3,938.6060
139974 ✓	12/16/2015	646.4001		1.00	1/8/2016	Released	0.00	\$781.2696	\$948.3400	\$410.3858	\$0.0000	\$1,748.9840	\$0.0000	\$0.0000	\$3,888.9794
139975 ✓	12/16/2015	646.4001		1.00	1/8/2016	Released	0.00	\$779.1612	\$948.6670	\$410.3118	\$0.0000	\$1,744.5434	\$0.0000	\$0.0000	\$3,882.6834
139976 ✓	12/16/2015	646.4001		1.00	1/8/2016	Released	0.00	\$779.1612	\$948.6670	\$410.3118	\$0.0000	\$1,744.5434	\$0.0000	\$0.0000	\$3,882.6834
139977 ✓	12/16/2015	646.4001		1.00		Released	0.00	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
139978 ✓	12/16/2015	646.4001		1.00	1/8/2016	Released	0.00	\$604.5691	\$878.0347	\$351.9185	\$0.0000	\$1,363.3550	\$0.0000	\$0.0000	\$3,197.8773

<b>Grand Totals:</b>	<b>Lab Hrs</b>	<b>0.00</b>
	<b>Lab Amt</b>	<b>\$3,731.0203</b>
	<b>Material Amt</b>	<b>\$4,665.3819</b>
	<b>Outplant</b>	<b>\$2,029.2261</b>
	<b>Var Burd Amt</b>	<b>\$0.0000</b>
	<b>Fix Burd Amt</b>	<b>\$8,365.2012</b>
	<b>Matl Burd Amt</b>	<b>\$0.0000</b>
	<b>Inventoried Costs</b>	<b>\$0.0000</b>
	<b>Wip Amt</b>	<b>\$18,790.8295</b>

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By _____  Lead hand / Supervisor Approval Verification _____  QC / QA Coordinator Approval _____	
<b>Root Cause</b> <div style="display: flex;"> <div style="flex: 1;">           Environment <input type="checkbox"/>            Design <input type="checkbox"/>            Doc/Data <input type="checkbox"/>            Equip/Tooling <input type="checkbox"/>            Handling/Pre <input type="checkbox"/>            Material <input type="checkbox"/>            Internal Transport <input type="checkbox"/>            Tribal Knowledge <input type="checkbox"/>            LOA <input type="checkbox"/>            Substation <input type="checkbox"/>            Past Expiry Date <input type="checkbox"/>            Misidentified <input type="checkbox"/> </div> <div style="flex: 1;">           No Re-verification <input type="checkbox"/>            Operator <input type="checkbox"/>            Offset/Setup <input type="checkbox"/>            Supplier <input type="checkbox"/>            Training <input type="checkbox"/>            Use for Testing <input type="checkbox"/>            Poor Information <input type="checkbox"/>            Rushing <input type="checkbox"/>            Product Improvement <input type="checkbox"/>            Process Improvement <input type="checkbox"/>            Manufacturing Process <input type="checkbox"/>            Past Due <input type="checkbox"/> </div> </div>		<b>FAULT CATEGORY</b> <div style="display: flex;"> <div style="flex: 1;">           Pressure/Forced <input type="checkbox"/>            Bending <input type="checkbox"/>            Centre Not Concentric <input type="checkbox"/>            Cracks <input type="checkbox"/>            Crimp/Kink/Ripple/Wave <input type="checkbox"/>            Cuffs <input type="checkbox"/>            Crushing <input type="checkbox"/>            Heat Treat <input type="checkbox"/>            Wave/Twist in Tube <input type="checkbox"/>            Marks/Chatter <input type="checkbox"/> </div> <div style="flex: 1;">           Temperature/Cure <input type="checkbox"/>            Set-up <input type="checkbox"/>            BOM/Route <input type="checkbox"/>            Broken/Damage/Defect <input type="checkbox"/>            Inspection Incomplete/Unqualified <input type="checkbox"/>            Contamination <input type="checkbox"/>            Countersink <input type="checkbox"/>            Cut Too Short <input type="checkbox"/>            Instructions Incomplete/Unclear <input type="checkbox"/>            Drill Holes <input type="checkbox"/> </div> <div style="flex: 1;">           Power Loss/Surge <input type="checkbox"/>            Folio/Program <input type="checkbox"/>            Grain <input type="checkbox"/>            Weld <input type="checkbox"/>            Wrong Stock Pulled <input type="checkbox"/>            Out of Sequence <input type="checkbox"/>            Off-set <input type="checkbox"/>            Mislabeled <input type="checkbox"/>            Fit/Function <input type="checkbox"/>            Misaligned/off center <input type="checkbox"/> </div> <div style="flex: 1;">           Positioned Wrong <input type="checkbox"/>            Outside Dimensions <input type="checkbox"/>            Over/Under tolerance <input type="checkbox"/>            Part Incorrect <input type="checkbox"/>            Part Lost/Missing <input type="checkbox"/>            Part Moved <input type="checkbox"/>            Drawing <input type="checkbox"/>            Finish <input type="checkbox"/>            Misread <input type="checkbox"/>            Turning Sequence <input type="checkbox"/> </div> </div>			
		OTHER : <input type="checkbox"/>			